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DIALOG Finance & Banking Newsletters, File 267 (1996 - present)

Set#	Query
L1	float$3 with rate$1 with note$
L2	variable with rate with obligation$
L3	taxable with float$3 with rate$1 with note$

L4	debt adj3 obligation$2
L5	(tax adj exempt) with bond
L6	municipality
L7	collateral
L8	purchas$3 with asset$2
L9	variable adj rate adj demand adj obligation$
L10	security with interest$1
L11	(interest investment) with default
L12	l1 and l2 and l5 and l6 and l7 and l8 and l10 and l11
L13	l1 or l3
L14	l2 or l4 or l9
L15	l10 or l11
L16	l13 and l14 and l15
L17	l5 and l16
L18	l6 and l16
L19	l7 and l16
L20	l8 and l16
L21	l5 and l6 and l7 and l8
L22	l21 and l16

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New financing instruments for state and local capital facilities

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Abstract:

The municipal bond market traditionally has been supported by large institutional investors, such as banks and fire and casualty insurance companies. In the 1970s, many of these institutions, faced with reduced profit margins, curtailed their municipal **bond** buying, forcing

tax-exempt bond yields to unprecedented highs. Interest costs increased significantly as **bond** issuers were forced to make yields more attractive to buyers. Investors were unwilling to lock into fixed returns, feeling uncertain about inflation, tax liabilities, and yield curves. Governments still needed to borrow, however, and investors still needed to earn returns. As a consequence, a number of new fiduciary and fiscal instruments have been devised to meet these respective needs.

Text:

Headnote:

Municipal bonds traditionally have been classified into two general types: term bonds, paid off in a lump sum at the end of the term of the loan, and serial bonds, retired in annual installments. Beginning in the late 1970s, however, a number of new fiscal instruments have been devised to meet the changing needs of the municipal bond market. While these new financing techniques are not a panacea, their careful application may uncover some real opportunities for meeting the needs of local government for expanded capital facilities.

The municipal bond market traditionally has been supported by large institutional investors, such as banks and fire and casualty insurance companies. In the late 1970s, many of these institutions, faced with reduced profit margins, curtailed their municipal **bond**amp; buying, forcing **tax**amp;-**exempt**amp; **bond**amp; yields to unprecedented highs. Interest costs increased significantly as **bond**amp; issuers were forced to make yields more attractive to buyers. Investors were unwilling to lock into fixed returns, feeling uncertain about inflation, tax liabilities, and yield curves. Governments still needed to borrow, however, and investors still needed to earn returns. As a consequence, a number of new fiduciary and fiscal instruments have been devised to meet these respective needs.

TRADITIONAL TYPES OF BONDS

Municipal bonds traditionally have been classified into two general types according to the method of redemption. Term bonds become due in a lump sum at the end of the term of the loan. All of the bonds in the issue reach maturity and must be paid off at the same time. Serial bonds are retired in annual installments directly from tax revenues, or in the case of revenue bonds, from earned income. Serial bonds offer greater flexibility in marketing and in arranging the debt structure of the jurisdiction or public organization.

The lump-sum principal payment for term bonds is met by making annual payments to a sinking fund. When invested at compound interest, these annual payments should produce the amount of principal required at maturity. Frequent actuarial computations should be made to determine the adequacy of sinking funds to meet principal payments at maturity. Some states do not permit the issuance of bonds for which the principal is funded solely through a sinking fund. With proper investment safeguards, however, term bonds do offer some advantages. Term bonds may serve to finance public enterprises that do not have established earning records. There are two types of serial bonds: annuity serials and straight serials. With annuity serial bonds, the debt service-payment is approximately the same each year (as with a home mortgage). The portion of the annual payment devoted to interest is higher in the early years of the issue, but declines as payments toward principal are made (as the outstanding principal is

retired). Straight serial bonds require annual payments of principal of approximately equal amounts. Interest payments are large in the early years and decline gradually as the bonds approach maturity.

BOND OPTIONS FOR A PRENATAL HEALTH CARE CLINIC

To illustrate these traditional bond options, assume that the Jefferson County Council has authorized the construction of a new prenatal health care clinic as part of the overall services of the County Health Department. The cost for construction and acquisition of capital equipment is estimated to be $2.5 million. The County Council has further authorized a 10-year bond issue to finance these costs.

The financial consultant hired by the County to assist in the placement of this bond has proposed three alternative bond strategies:

(1) A 10-year term bond with a 5 percent interest rate and a sinking fund estimated to accrue 4.5 percent interest annually;
(2) A 10-year annuity serial bond with a 5.25 percent interest rate; and

(3) A 10-year straight serial bond with a 5.5 percent interest rate.

The annual interest payments on the 10-year term bond at 5 percent would be $125,000. The amount that would have to be invested annually in the sinking fund to ensure an accrual of $2.5 million at the end of 10 years can be determined by applying the following formula:

Annual Sinking Fund Payment = Principal x (r)/[(1 + r) sup n] -1

Annual Payment = $2,500,000 x (.045)/[(1.045) sup 10] -1

Annual Payment = $2,500,000 x 0.08137846

Annual Sinking Fund Payment = $203,447

The annual interest and sinking fund payments total $328,447 and, therefore, the total debt service over the 10-year period would be $3,284,466, as shown in Table 1.

The annual debt service for the 10-year annuity serial bond can be determined by applying the following formula: (Formula Omitted) Therefore, the total debt service for the 10-year annuity serial bond would be $3,277,040. The payment schedule, assuming semi-annual interest payments and annual payments of principal, is shown in Table 2.

The total debt service for the 10-year straight serial bond can be determined by applying the following formula:

Total Debt Service = Principal + [(N + 1)/2 x r x Principal]

Total Debt Service = $2,500,000 + [11/2 x .055 x $2,500,000]

Total Debt Service = $3,256,250

The first-year debt service on the straight serial bond would be $387,500, again assuming semi-annual interest payments and annual payments of principal. The annual payments would "step down" by $13,750 each year, as shown in Table 3.

The question remains: which of these alternatives is the preferred bond strategy for Jefferson County? If the County can afford the initial annual payment of $387,500, then the straight serial bond would be the preferred

option since the total debt service is $20,790 less than the annuity serial bond and $28,216 less than the term bond. The term bond and the annuity serial bond have approximately the same annual costs. If the County Council thought that in future years a better rate of return than 4.5 percent on the sinking fund could be obtained, then the term bond would be the preferred alternative between these two options.

Zero Coupon Bonds

Zero coupon bonds (also called "zeros") were introduced into the **tax-exempt bond** market in the late 1970s and quickly became a "hot item" in public finance. As a form of original investment discount bonds, they are especially favored by individual bond buyers. Zero coupon bonds may be issued as either general obligation bonds or revenue bonds.

(Table Omitted)

Captioned as: TABLE 1

(Table Omitted)

Captioned as: TABLE 2

Brokerage firms have purchased traditional coupon-bearing, long-term issues and have stripped the coupons from the bonds. Each component is then sold separately. In effect, the bond becomes a zero coupon bond, with the guarantees of the issuing public agency. Without coupons, the value of what is called the corpus is much reduced.

Zero coupon bonds sell at substantial discounts from the customary par or face value of $1,000 because they pay no interest. By paying face value upon maturity, however, they offer capital gains that may be as much as fifty times the original investment, depending on the length of the issue and the equivalent rate of return on the original investment. For example, the Virginia Housing Development Authority issued mortgage revenue bonds in 1982 with a 2014 maturity, priced at $20, for an annualized yield of 12.586 percent. The Virginia issue also included bonds maturing in 2001, priced at $100, for an annualized yield of 12.202 percent, as well as some maturing in 1994, priced at $250 per $1,000, for an annualized yield of 11.253 percent.

Federal tax laws entitle bondholders who forego tax-free interest over the life of their investment to receive tax-exempt capital gains upon maturity. The result is a form of tax-free income, accrued annually from the time the bonds are first issued. Held to maturity, for example, 15-year zero coupon bond purchased for $315 will provide a tax-free capital gain of $685; or, according to the IRS, $45.67 in tax-exempt income each year ($685 divided by 15). These earnings are the equivalent of an 8 percent compound interest on the original investment.
(Table Omitted)

Captioned as: TABLE 3

Zero coupon bonds may be attractive to investors who are interested in investing for a future need, such as retirement or college for their children. Since the interest on a zero coupon bond, in essence, is automatically reinvested in the bond, this type of bond may appeal to investors who expect future interest rates to decline or want the convenience of not having to deal with how to invest their returns.

From the **municipality** standpoint, issuing zero coupon bonds

means that a much larger face value (value at maturity) must be issued. For example, if the objective were to finance the $2.5 million prenatal health care clinic through a 10-year zero coupon bond that provides a 6 percent annual rate of return, the Jefferson County Council would have to issue bonds which would be worth over $4.25 million at maturity (see Table 4).

Debt limits usually apply to the par value of bonds. Therefore, zero coupon bonds usually use the same level of debt capacity as a non-zero coupon bond for the same amount, yet result in less bond proceeds because they are sold at a discount. Since all interest is paid at maturity, the issuer must have substantial funds available for what is effectively a balloon payment.

Stepped Coupon Bonds

Stepped coupon bonds have also grown in popularity since their introduction in the early 1980s. Each maturity of a traditional serial bond has a single coupon rate payable over the life of the bond. Stepped coupon bonds, on the other hand, use a variable maturity schedule, with coupon rates that start at lower levels and progressively increase to higher levels, even though all the bonds in the issue are sold at par. Stepped coupon bonds are particularly applicable to the financing of projects requiring that interest payments be made from project revenue.

The increase in coupon payments each year is intended to provide investors with a hedge against inflation and thus make the bonds more marketable. The assumption is that, as the purchasing power of paper money goes down each year, stepped coupons give bondholders more paper money to keep pace with inflation.

From the perspective of the issuing government, more bonds may be scheduled to mature in early years because of the lower coupon rates, thereby lowering the average interest rate for the issue. The repayment schedule for a $2.5 million bond issue for the County prenatal health care clinic, shown in Table 5, provides for an initial principal payment of $295,000, a second-year payment for $285,000, and so forth. Using this approach to a stepped coupon bond, the Jefferson County Council could save $138,020 in interest costs over the straight serial issue shown in Table 3.

Compound Interest Bonds

Compound interest bonds (also called capital appreciation bonds, accumulators, or municipal multiplier bonds) are sold at face value. The interest component is held by the issuer and compounded at a stated rate so that at the bonds' maturity, the investor receives a lump sum payment, consisting of both the principal and interest. An investor in compound interest bonds still pays much less for the bond than it would be worth at maturity. For example, a 10-year bond with a face value of $1,000, earning at a compound interest rate of 6 percent, would be worth $1,790.85 at maturity (see Table 6).

The main advantage of these bonds over regular coupon bonds is that an investor knows exactly what the total return on his or her investment will be. With a traditional coupon bond, the bond holder must reinvest semi-annual interest earnings at the then prevailing rate, thus making the total return uncertain. Compound interest bonds guarantee the current rate of return for the duration of the issue-as much as fifteen to twenty years. This type of **bond** combines the investment multiplying power of compound interest with the income-sheltering feature of traditional **tax-exempt** bonds. If interest rates are expected to fall, investors will be attracted to zero coupon bonds and compound interest bonds. However, if interest rates are expected to increase, investors may be reluctant to invest in these types of bonds.

For an issuer, the main advantage to compound interest bonds relative to zero coupon bonds is a legal one. Since debt limits usually apply to the par value of bonds, compound interest bonds and zero coupon bonds with the same par value will utilize the same debt capacity. However, the compound interest bonds will result in more bond proceeds since zero coupon bonds are sold at a discount. Issuers approaching a debt limit may find compound interest bonds to be more desirable than zero coupon bonds.

Since all interest is paid at maturity, payments to a sinking fund must be structured to earn a sufficient sum to cover the "appreciated capital," that is, the accumulated interest and principal costs. At some point during the term of the bond, the issuing jurisdiction may begin to make interest payments to the bond holders. The total annual payments are much higher, however, because interest must now be paid on the interest that has accumulated as additional capital (principal).

(Table Omitted)

Captioned as: TABLE 4

(Table Omitted)
Captioned as: TABLE S

The justification often stated for the use of compound interest bonds is that the cost impact of the improvement is deferred until more direct beneficiaries of the facility can participate in the payment of these costs (e.g., through increased tax revenues). The impact of the additional interest costs on the "appreciated capital" can be partially absorbed if the sinking fund investments are carefully managed. Misuse of these bonds, however, can create a floating debt of significant proportions. Flexible Interest and Variable Rate Demand Bonds

The idea of issuing tax-exempt bonds with a floating interest rate was adapted in the 1980s from the Eurocurrency market. This approach provides stability for both the issuer and the bondholder throughout the life of the bonds, particularly during times of interest rate volatility. As the name implies, the interest paid (yield) on a flexible interest bond changes over the life of the bond, based on some interest index printed on the bond itself. This feature stands in contrast to the traditional fixed-rate bond, on which the interest rate remains constant, but the market value may change when interest rates rise or fall.

Since flexible interest bonds have less risk of principal erosion, interest costs are lower than on long-term, conventional bonds. The savings in interest costs to the issuer can be very substantial; the difference between a traditional bond and a flexible interest bond is often as much as 3 to 3.5 percent.

(Table Omitted)

Captioned as: TABLE 6

The interest index most often used is the average weekly rate of Treasury bills or bonds issued during the preceding interest period. For example, the floating rate for a short-term bond might be pegged at 67 percent of the average weekly T-bill quote, while the rate for a longer-term issue might be set at 75 percent of the average weekly quote on thirty-year Treasury bonds (see Table 7).

An additional feature of flexible interest bonds is a swing limit-a pre-established range within which the interest (cost to the public agency) may vary. Bonds issued in the late 1980s, for example, had floating

interest rate limits of 7 percent minimum to a maximum of 12.5 percent over the life of the bonds.

As with other municipal bonds, the maturities of flexible interest bonds vary. Some recent flexible interest bonds have been structured so that they can be redeemed at the end of a given calendar quarter. Flexible rate certificates issued by the State of Washington, for example, pay interest each month, and bondholders may elect on the fifteenth day of each month in which the interest payments are due, either to accept a new interest payment date at the same rate as the previous month, or to redeem the bonds at par.

Flexible rate bonds with such short features are often called variable rate demand notes or certificates of indebtedness. The most common is the "lower floater," in which the interest rate is adjusted weekly relative to a specified index that reflects the current market.1 Holders of lower floater bonds can require redemption after seven days' notice. A redemption option that can be exercised in fewer than thirty days, such as the lower floater, is called a "continuing put."

The structure of long-term, variable rate demand debt involves a rather complicated credit system. The debt issuer usually enters into an agreement with a credit facility, typically a commercial bank. The bank provides the issuer with a letter of credit. Should bondholders redeem the bonds before maturity, the issuer enlists the services of a remarketing agent who resets the interest rate and then tries to remarket the bonds. If some bonds remain unsold, the issuer's remaining cash needs are met by the agreement with the credit facility, which either purchases the unsold bonds or makes a loan to the issuer. The issuer must pay the fees associated with the remarketing agent and the credit agreement. If the credit facility has to provide cash, the issuer also will incur interest on the funds, which typically is tied to the bank prime rate or higher.2

Caps, Floors, and Collars

A system of caps, floors, and collars has been developed as derivative products to help mitigate the consequences of increasing interest rates. With these instruments, issuers can maintain their future interest rate payments within set boundaries.

Under an interest rate cap (also called a ceiling), in exchange for a one-time premium from the bond issuer, a third party agrees to pay the issuer if a specified interest rate index rises above a certain percentage rate, known as the cap or strike rate. The premium depends on the bond's maturity date and usually is in the form of basis points on the notation principal-the size of the contract upon which interests amounts are determined. The more distant the maturity date, the larger the principal, and the lower the strike level, the larger the up-front fee. The bond issuer receives no payments if the floating interest rate remains below the strike rate for the duration of the contract. In effect, the bond issuer is buying an insurance policy to protect against high interest rate payments on its variable rate bonds.3

(Table Omitted)
Captioned as: TABLE 7

A floor is the mirror image of a cap or ceiling. With a floor contract, the bond issuer receives an up-front fee from a third party. If the interest rate index falls below the floor or strike level, the issuer makes payments to the third party. Similar to a cap agreement, if the floating index does not fall below the strike level, the issuer pays nothing.

A collar is the simultaneous purchase of a cap and sale of a floor by the issuer. Under this contract, the government entity trades any benefits from a potential fall in the interest rate index for protection against excessive interest rates. Under a collar agreement, the issuer defines a specific range for its interest rate payments, eliminating some of the uncertainty associated with issuing variable rate debt. The closer the cap and floor strike rates are set, the more the bonds will resemble fixed rate obligations. The cap and floor levels of the collar agreement can even be determined so that they perfectly offset each other.

According to a 1994 survey by the Government Finance Officers Association, approximately 6 percent of the municipal issuers had used derivative products in connection with bond sales. More than a third of those issuers were from California and Florida. About 17 percent of these derivative users had entered into caps, floors, or collars, with the average term of contract of five-and-a-half years. Reasons for entering into derivative agreements cited by users include: lower borrowing costs, the need to lock in current interest rates, the decrease in interest rate risk, and the reduction of debt service uncertainty.4

Callable Bonds

Bonds may be issued with the provision that they can be paid off-"called in" for payment-prior to their maturity date. Virtually all bonds are now issued with a "date of first call" provision, after which the issuer can choose to retire the bonds before the stated maturity date. In general, the date of first call for municipal bonds is five to ten years after the date of issue. The call provision normally is exercised with appropriate notice only on interest payment dates.

Callable bonds can afford greater flexibility in a jurisdiction's debt structure. Bonds may be recalled and refunded at more favorable terms if (1) the market or the jurisdiction's credit rating improves, (2) the initial retirement schedule proves too rapid, or (3) a period of declining revenue is encountered. The callable feature can be used to avoid overly rigid fiscal responsibilities, while at the same time permitting more rapid retirement if the project's revenue capacity expands. Terms of the call will dictate whether the issuer must pay a premium to investors, which, in turn, may erode any resulting savings from refunding.
A variation on the callable bond has been used primarily in conjunction with mortgage revenue bonds used to finance low-income housing. A bond holder may purchase such bonds with the expectation of holding them for eight to ten years. However, as rental income from the housing units reaches pre-determined thresholds, the authority is required to call in some portion of the outstanding bonds for early payment at face value. The bonds are redeemed by lottery: the individual bondholder does not know when or if his/her bond will be called in for redemption.

Tender Option Bonds

A tender option bond, also known as a "put bond," offers the investor the option of submitting the bond for redemption before maturity. Usually the investor may redeem or "put in" a bond five years after the date of issue or on any anniversary date thereafter. In return for this option, the investor accepts a lower yield. The issuer pays a lower rate of interest (usually about 1 percent less than for conventional bonds of the same maturity), and consequently, the jurisdiction's cost is lower. However, the bond usually returns more to the investor (about 0.75 percent) than conventional bonds that mature on the first prescribed put date.

Tender option bonds may also be issued with a simultaneous "call" date, on which the issuer can call in and pay off the bonds. Thus, the issuer and

the bondholder have equal rights to cash in the bonds when market conditions and interest rates are favorable. If interest rates go down, a put bond will probably be called in by the issuing government. Conversely, if interest rates go up, the bondholder can "tender his option" to be paid at face value by the issuer.

Detachable Warrant Bonds

A warrant gives the holder the right to purchase at some future date more of the same securities to which the warrant is attached, at the same price and rate of return as the original bond. In exchange for that right, the issuer pays a lower rate of interest (about 0.5 percent less) than offered on otherwise comparable securities. The marketability of such bonds depends on the opinion of prospective buyers as to anticipated fluctuations in interest rates. If interest rates rise, the savings to the issuer become real because of the initial lower interest cost. If the rates fall, the opposite is true.

The Municipal Assistance Corporation of the City of New York issued the first public tax-exempt detachable warrant bonds in 1982. These bonds gave the holders warrants that could be exercised for two years. The expectation was that, even if interest rates declined during the two-year period, the savings from the lower interest payments over the life of the bond issue would amount to about $11 million. Since interest rates held relatively constant during this period, the long-term savings were even greater than anticipated.

Private Activity Bonds

A private activity bond is a municipal **bond**, used either entirely or partially for private purposes. To qualify as a private activity, **tax-exempt bond**, the debt must fit into one of the following seven categories:

Exempt facility bonds used to finance government-owned airports, docks and wharves; mass commuting facilities; facilities for the furnishing of water, sewage treatment, or solid waste disposal; qualified residential rental projects; facilities for local furnishing of electric energy or gas; local district heating or cooling facilities; qualified hazardous waste facilities; and high-speed intercity rail facilities;

Qualified mortgage bonds used to finance multi-family and single-family housing;

Qualified veterans mortgage bonds used to assist veterans in financing housing;

- Qualified small issue bonds, also called Industrial Development Bonds, used for manufacturing facilities with capital less than $10 million looking three years back or three years forward;

Qualified student loan bonds used to finance student loan programs;

Qualified redevelopment bonds issued for use in areas that the government designates as distressed areas or enterprise zones; and

Qualified 501(c)(3) bonds issued to finance facilities for non-profit corporations.

Private activity bonds must also meet volume cap requirements and satisfy several other requirements outlined in section 147 of the federal statutes. Each state's volume cap is determined by a formula computed as the greater

of either $50 per capita or $150 million. The purpose of these bonds must be defined specifically and must be used according to the limitations of the state and federal statutes. The strict limitations on private activity bonds make them inflexible-changes in their purpose may make them taxable.

Tax-exempt bonds offer private entities lower interest rates than they would otherwise be able to obtain. A government can use private activity bonds to support economic incentives to targeted activities or geographic areas. Some economists believe that these incentives create positive economic effects beyond the specific project or program that is being financed.

LEASE-PURCHASE FINANCING

The use of lease-purchase agreements grew significantly in the 1980s and has become a powerful and flexible financing tool for state and local governments as an alternative to long-term borrowing. In 1980, lease-secured debt of state and local governments totaled less than $1 billion. By the end of the decade, however, that figure had grown to between $7 and $8 billion.5

In a lease-**purchase** agreement, a government unit acquires an **asset** by making a series of payments which are considered installments toward the **purchase** of the **asset**. The government may obtain title to the **asset** either at the beginning or at the end of the lease term. The most important benefit of lease purchases is the flexibility that they offer. Lease purchases can be entered into much more quickly than bonds. Expedited issuance can permit a government to save money by avoiding inflation in construction costs. Lease purchases enable a government both to avoid committing a large share of operating revenues to the cash **purchase** of an **asset** and to preserve its general obligation debt capacity. In addition, lease-**purchase** financing avoids some of the substantial referendum costs associated with general obligation bond financing. Finally, lease purchases permit the acquisition of equipment that costs too much to fund from one fiscal year's budget but has too short a useful life to finance with bonds or other longterm debt.6

Individual lease purchases can be consolidated into a master lease-purchase program in order to achieve lower interest rates, tighter controls, and lower administrative costs. Typically, a centralized governmental department issues tax-exempt debt to finance the **purchase** of vehicles, equipment, computers, or other capital **assets** on behalf of other governmental departments. The centralized department then enters into a standardized lease-**purchase** contract with each of the other departments. The lease-- purchase payments received from these departments are used to repay the debt.

Master lease-purchase programs often are financed through the issuance of commercial paper that may be periodically rolled into a fixed-rate bond with a five- to sevenyear maturity. The use of commercial paper allows the government to issue additional debt on an as-needed basis without incurring large incremental issuance costs.

A master lease-purchase program often can obtain significantly lower interest rates than would be available through vendor-financed lease purchases. The centralization and standardization of the lease-purchase contracts also can result in lower administrative costs and tighter controls over lease purchases. Centralizing financing procedures reduces the likelihood of vendor leases being entered into without the proper authorization. Some states and local governments, however, have encountered unwillingness by agencies to participate in a master lease-purchase program because of a perception that such programs reduce an agency's purchasing

flexibility and autonomy.

The main players in a lease-purchase agreement are: (1) the lessee-a government unit; (2) the lessor-a private firm, vendor, or another governmental entity; and (3) investors. After arranging an agreement, the lessor often will assign the rights to the lease payments to a number of investors. Certificates of participation, commonly referred to as COPs, are a widely used mechanism to provide individual investors the opportunity to purchase fractional interests in a particular lease. Certificates are generally issued in $5,000 denominations through a competitive or negotiated sale to underwriters and can receive investment ratings from a rating agency. COPs can be traded in the secondary market, making them more marketable. Therefore, issuers are able to obtain a lower interest rate on COPs than on other types of lease-purchase financing. The relatively small denominations of the COPs spread the risk associated with lease-- purchase transactions and facilitates an active secondary market.7 The tax-exempt status passes through to owners of COPs who receive the distribution of the interest component.8

TAX-EXEMPT LEVERAGED LEASE FINANCING

Lease purchases have been used primarily to finance the acquisition of equipment, such as computers and motor vehicles. Increasingly, however, more costly, long-term projects, such as the acquisition of real property and the construction of new facilities, have also been financed using lease-purchase agreements.9

Tax-exempt leveraged lease (TELL) financing is one of the more creative approaches, which in today's investment market often is more versatile and cost-effective than conventional borrowing. TELL financing can greatly reduce the cost of borrowing on capital projects of $5 million or more. In TELL financing, municipalities generate capital funds by selling public facilities. The sale is financed through tax-exempt revenue bonds. Once the buildings have been sold, the private investment is "leveraged" by the **municipality** leasing back the facility at subsidized rates. The results are sharply reduced financing costs, a new pool of unrestricted funds for capital projects, and greater financial flexibility for borrowers.

Four main participants in TELL financing are a public jurisdiction, a limited partnership, a financing authority, and the bondholders. Any government unit or public agency authorized to issue special-purpose revenue bonds or industrial development bonds may take advantage of leveraged lease financing. The jurisdiction offers to sell a public facility to a private investor (using operating as a special-purpose limited partnership) who buys the facility by making a down payment and, over a five-year period, contributing equity equal to 25 to 30 percent of the sales price. The jurisdiction then leases back the building on a long-term basis for continued use. The infusion of equity by the investor reduces rents significantly during the first five years.

The balance of the sales price is financed by tax-exempt revenue bonds issued on behalf of the partnership and loaned by a qualified financing authority (such as an industrial development authority). Underwriters arrange the **tax-exempt bond** financing and structure the sale/leaseback transaction to meet the requirements of the **bond** market, the private investors, and the government. The lease serves as **collateral** for the loan which, in turn, secures the bond issue. The proceeds of the sale then finance the intended capital improvement.

In purchasing the facility, the private investors obtain the tax benefits associated with ownership. The subsidized base payments during the initial

five years are a reflection of the value of these benefits. Lease payments represent the cost of financing to the governmental unit. In reducing the magnitude of the lease payments, TELL successfully reduces the effective borrowing cost below the issuer's current tax-exempt rate.

Although investors own the building, the facility lease is carefully written to provide the government with maximum flexibility and control over the use and final disposition of the building. Typically, a jurisdiction leases back the building for a period of thirty years on a net-net basis; that is, the jurisdiction assumes the basic operating and maintenance costs. In so doing, the jurisdiction retains control over the day-to-day management and operations. In addition, the lease usually provides the government with several renewal options and with rights to repurchase the facility. As a further protection, the public agency often retains ownership of the land, leasing it to the investors for a period of sixty-five years. At the end of the land lease, the land and improvements automatically revert to the government.

Under TELL financing, the repurchase price cannot be negotiated in advance of the sale. However, lease provisions can shield the jurisdiction from inflated real estate values at the time of repurchase. These safeguards include the land lease, the renewal options, and the method of appraisal that defines the repurchase price at the end of thirty years. The land lease, for example, serves to encumber the facility and to limit its future value in the open market.

Almost any capital project, from new construction to the refunding of outstanding debt, can be financed through leveraged leases. College dormitories, for example, have been successfully financed through TELL arrangements. In considering TELL financing, the managing underwriter should assist the government in developing a feasibility study, which should include an analysis of the impact of the project's proposed financing terms on the local budget, an estimated rental schedule, and an outline of legal and financial actions required of the government. Upon completion of this analysis, the managing underwriter, the bond counsel, and representatives of the equity partnership should draft necessary lease, purchase, and financing documents, followed by the submission of a firm purchase contract within sixty to ninety days.

A NOTE OF CAUTION

In the dynamic and uncertain period of the 1980s, state and local governments were forced to develop capital financing programs that were more responsive to their overall financial conditions and fiscal policies than traditional general obligation and revenue bonds.

The federal tax reform bill passed in August 1986 had a number of effects on the future supply of **tax-exempt** financing. The act eliminated significant tax breaks to banks, among the biggest **bond** buyers prior to the enactment of this act. As a consequence, the municipal bond market has continued to shift from institutional buyers to retail customers with smaller pocketbooks. Restrictions on the types of projects that can be financed by tax-exempt bonds, along with statewide caps on the volume of new issues, have resulted in further adjustments in municipal bond issues. A reduction in the supply of new issues has tended to increase the relative value of municipal bonds, particularly in states that have historically low municipal debt.

The second important effect of the tax bill is the lowering of the maximum federal tax bracket from 50 percent to 33 percent. Although the new, lower federal tax brackets have already been discounted, municipal bonds continue to be attractive relative to taxable alternatives for the vast majority of

investors whose marginal tax rates are at the higher end of the federal tax schedule. At the same time, since federal tax brackets have been lowered, the state portion of an individual's total effective tax bracket becomes larger. As a consequence, the exemption from state taxes offered by municipal bonds to residents of the state of issue becomes more important.

New fiscal instruments and financing techniques are not a panacea for meeting the needs of local government for expanded capital facilities. More conventional approaches should not be abandoned unless officials are satisfied that sufficient benefits will accrue when compared to the risks. The emergence of more innovative approaches stems from the willingness and ability of state and local governments to accept and deal with the uncertainty of future markets for financing capital facilities. Practical concerns are also part of the equation, including the political acceptability of such approaches, the ability of governments to structure and manage these creative financing mechanisms, and, of course, the laws that govern capital financing. Interest payments are still the cost that governments must pay for the use of other people's money. Careful application of new financing techniques, however, may uncover some real opportunities or provide capital resources that otherwise would be unavailable.

Footnote:

NOTES

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State and local governments as borrowers: Strategic choices and the capital market

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Abstract:

Securities are issued by state and local governments to obtain financing for public projects or activities. Municipal securities have long enjoyed 2 distinctive qualities: their tax exempt status and an absence of restrictive federal regulations. However, both qualities are now threatened. Issuers of state and local government securities have an optimum goal to obtain the lowest cost of capital over the desired repayment schedule. Governmental jurisdictions are not created equal in their ability to borrow or in their cost of borrowing; some issuers borrow more than others, and some borrow at lower cost than others. Issuers face many hurdles in the borrowing process, but in addition to designing the bond structure, an issuer has choices in how and when it will sell its bonds. Revenue bonds can help issuers sidestep hurdles imposed on general obligation borrowing. Creative debt instruments help issuers take advantage of changing market demands. Delaying entry into the long-term market causes the borrower to accrue interest cost savings.

Text:

State and local governments issue securities to obtain financing for publicly desired projects or activities. A borrower's optimum economic goal is to obtain the lowest cost of capital over the desired repayment schedule. The role of the government's chief financial officer is to design appropriate strategies to achieve this goal within a context of changing

market conditions, debt structures, and influences on borrowing choices.

Once considered staid and consistent, state and local government debt instrument--collectively known as municipal securities--now are market-driven decisions. Municipal securities are structured in terms of maturity, denomination, interest (coupon) rate and other features to attract particular investor groups, such as mutual funds. Debt offerings are timed to meet market opportunities, not just the local financing agenda. Further, the security backing the debt is less the full taxing power of the borrower than the ability of an enterprise project to generate revenues to cover debt costs. Taken together, these, and other, practices reveal a dynamic financing arena compounding the search for funds,

Municipal securities have long enjoyed two distinctive qualities--their tax-exempt status and an absence of restrictive federal regulations. Both qualities are now threatened. Unique among investment options, municipal securities pay interest that is traditionally exempt from the U.S. income tax. Although Congress has restricted the tax exemption for certain types of uses over the last two decades, it was not until the U.S. Supreme Court's South Carolina v. Baker (1988) decision that it became clear that the Congress, not the Constitution, remains the benefactor of the federal income tax exemption. What Congress grants, it can take away. Although a deceptively simple statement on the surface, it means that Congress can avoid federal income tax losses (also known as tax expenditures) by further curbing or eliminating the tax-exempt nature of municipal securities. This could help generate funds to offset some of the federal budget deficit, but it would do so by abolishing a domestic market dedicated to financing programs and projects approved by state and local governments.

Limited federal regulatory oversight, another hallmark of the municipal market, is threatened also. While corporations face a web of securities laws, issuers of municipal securities have enjoyed little federal interference, short of an issuer committing fraud in a debt offering. The Securities and Exchange Commission (SEC), spurred by the $2.25 billion Washington Public Power Supply System (WPPSS) default, has turned its attention to the municipal market. Recently, SEC rules have been clarified to state that it is unlawful for investment banking firms to participate in most municipal debt offerings without first investigating the issuer's disclosure documents. The SEC is prohibited by the Tower Amendment of 1975 from directly regulating issuers. By placing the regulatory burden on the investment banking community, it is understood, and expected, that the effective burden rests with the governmental debt issuer and the adequacy of the issuer's disclosure documents. As a result of the SEC actions, national standardization of disclosure documents is in the offing.

This article reviews the municipal finance literature and practices to isolate the behavior of issuers. I first review the market behavior of issuers--specifically, differences in terms of the capacity to borrow and the costs of borrowing--and then discuss strategies appropriate to these market concerns. In the second part of the article, the focus is on issuer strategies relative to individuals or groups with a formal stake in state and local debt financing. Once public executives recognize these market features, they can adopt active financial management strategies to exploit the market on behalf of their taxpayers.

THE BEHAVIOR OF ISSUERS

Governmental jurisdictions are not created equal in their ability to borrow or in their cost of borrowing. As political scientist Sbragia (1983, p. 98) notes, the market is not a "redistributive or compensatory mechanism," rather it rewards the strong and already penalizes the weak, As a result, two basic issuance behaviors are observable. First, some issuers borrow

more than other issuers. Second, some issuers borrow at lower costs than others.

THE CAPACITY TO BORROW

An issuer's capacity to borrow is neither absolute nor static. Rather, debt issuance varies, as tempered by incentives and disincentives. Incentives are based on the need for funds to secure physical assets that will enhance public services while also advancing political agendas and exploiting capital market opportunities.

A leading incentive to borrow arises from a preference to spend. The focus is on what can be purchased or constructed with the capital--physical assets such as buildings, highways, facilities, and other infrastructure items. Whereas capital improvement needs vary by jurisdiction, a series of recent studies document the nation's infrastructure needs (for example, National Council on Public Works Improvement, 1988; Office of Technology Assessment, 1990). Unmet needs represent a borrower's appetite for capital, if available on the right terms. Plus, the argument that public infrastructure investments have a positive influence on private productivity is the subject of a growing body of research (Cuciti, 1991, for example).

Financing a project over time through borrowing overcomes the lack of sufficient up-front capital, a second incentive to borrow. An issuer could husband slack resources by foregoing immediate consumption in order to build a "savings" account. Few governmental entities finance capital improvements out of savings, however. Rather, most jurisdictions use one-time or yearly flows. An immediate and one-time infusion of capital results from external borrowing. In contrast, proceeds from an earmarked tax permit continual restocking of a capital investment account. The charter of Akron, Ohio, for example, dedicates for capital improvement purposes 27 percent of the yearly proceeds from the local income tax. Assured of a yearly base of financial support, capital improvement needs are further enhanced with bond proceeds and other revenue sources, especially federal and state project grants.

Third, borrowing engenders political capital. According to public-choice theory, politicians seek to maximize their self-interest, or reelection probability. The trade currency, political capital, is facilitated by the stock of funds generated from borrowing. In fact, current federal tax law encourages state and local governments to expend bond proceeds quickly, measured in months, thus stripping issuers of the option to borrow at low tax-exempt rates and then invest the bond proceeds in higher yielding taxable investments while delaying expenditure of bond funds--termed arbitrage. Furthermore, being able to construct new facilities, with repayment stretched out over several decades, creates a sort of fiscal illusion. This helps to explain the propensity for capital projects to become a "porkbarrel," or the trading of votes to support projects in various districts. Public choice theory postulates strong incentives to create debt. Research on governors and their propensity to issue debt confirms that debt issuance occurs in time to bolster reelection efforts (Baber and Sen, 1986).

Exploiting a changing market constitutes a fourth incentive to borrow. Outstanding debt normally imposes a fixed debt-service cost on the issuer based on factors present at the time of borrowing. Market conditions change; contemporary and prospective views of the market may provide an opportunity to achieve interest savings beyond that found in the original issuance. One method requires calling in old debt at the earliest possible date, using proceeds generated from new debt issued at lower rates. Yet the original debt may contain provisions prohibiting the issuer from redeeming

the security prior to its stated maturity, thus negating such a call. Issuers circumvent call restrictions by advance refunding--where funds generated by new debt (at lower rates) are placed in escrow to pay the old debt service as it comes due, not early as with a call. In recent years, debt refunding has accounted for one-fifth or more of the total volume of new bond issues (Bond Buyer, 1991).

A listing of disincentives to borrow must include legal, political, and economic factors. Leading the list is the legal or structural limit, expressed either in absolute or relative terms. At first glance, it may seem that an absolute prohibition on borrowing is clear (either it is allowed or it is not), but exceptions are possible. For example, the State of Indiana is prohibited from issuing general obligation debt yet it enters the capital markets by having several statutory authorities finance infrastructure and economic development projects on its behalf.

A relative limit permits borrowing, but only up to a certain level. Debt ceilings require issuers to ration their debt appetite. For local governments, a typical ceiling is expressed as a percentage of the assessed value of property within a jurisdiction's boundaries. Issuers circumvent these limits by borrowing against project revenue-generation capability, expected streams of earmarked taxes (e.g., a sales or gasoline tax), or agreements to pay yearly lease payments equal to the debt service on a public-use facility.

To have excess legal capacity to borrow means little if political hurdles are not overcome, a second disincentive to borrow. Gaining approval for a particular debt issuance requires governing-body support, and, where applicable, voter approval and state validation. Navigating these hurdles requires a combination of consensus decision making, careful timing, skilled marketing, and legal preciseness. Generally, voter approval is the most uncertain of the legal hurdles that must be addressed.

Third, an economic disincentive to borrow is the obvious requirement to pay back the borrowed funds, with interest. With a diversified, growing local economy, issuers can borrow against a future, larger tax base. In contrast, some jurisdictions face liquidity problems in handling current spending, much less repaying past borrowing or incurring more long-term obligations. This is especially a problem if no new taxes are levied to support the new borrowing or the tax base is not diversified or growing. This burden to repay requires prospective borrowers to temper their debt creation activities. Confirmation that issuers perform some capital rationing and control is the fact that no general obligation bonds are known to have defaulted since the Great Depression (Davidson, 1991). The widespread fiscal stress of state and local governments in the early 19905 warrants careful monitoring, however. Of course, this does not convey much, if anything, about the cost of debt.

THE COST OF BORROWING

The market behavior of issuers is characterized by a second phenomena: some issuers borrow at lower costs than other issuers. Why? Although a quick (and incorrect) answer is that the credit rating assigned to the issue greatly determines the interest rate, the rating is really more the result than the cause. Besides, the yields of individual tax-exempt bonds are determined by many variables, including many outside the issuer's control (Cook, 1982). This article focuses on issuer experience, bidding competition for its debt, frequency, and market competition.

First, debt issuers benefit from market experience. Bland (1985) demonstrates that up to a point, the more experience a municipality has with debt financing, the more likely the municipality will generate interest rate savings. He places the upper limit to this benefit of

experience at four prior sales within a ten-year period.

Second, state and local governments benefit from more competition for their bonds. As demand for an issuer's securities increase, the issuer's cost of borrowing declines (Cook, 1982).

Third, the frequency of the borrowing can impact borrowing costs. One strategy calls for frequent market entries. Lennox Moak, the dean of municipal finance, advocated sales of identical security at intervals of not less than six month (Moak, 1982, p. 161). Consistent with this advice, a study of the secondary market for New York City debt concluded that the city should "establish itself as a seasoned and reliable issuer" (Financial Control Board, 1984, p. 4). A contrasting view emerges from a study of smaller jurisdictions (Bland, 1984) in which infrequent issuers gained interest rate savings. The greatest savings accrued to two groups--infrequent issuers borrowing less than half a million dollars and infrequent issuers borrowing large amounts. Based on the research, Bland (1984) advises issuers to delay entry into the market until various needs are bundled into a larger, omnibus debt package.

Fourth, an issuer receives a penalty for timing a sale in conflict with other issuers, especially those selling larger amounts. When competitive bids are due at or near the same time for more than one issue within a broad market, issuers are likely to receive fewer bids than might otherwise be the case. This exacerbates some issuer's problems since research reveals that lower rated bonds tend to receive fewer bids, and the bids received have less dispersion (or range) in rates, resulting in higher borrowing costs (Cook, 1982).

Although the credit rating services point out that the debt issue determines the rating, higher credit ratings are associated with lower borrowing costs. In addition to designing the bond structure, an issuer has choices in how and when it will sell its bonds, factors that also influence the cost of borrowing.

RELATIONSHIPS AND STRATEGIES

Given the fact that most state and local governments can borrow funds under specified circumstances and that their needs vary, opportunities exist for some jurisdictions to adopt deliberate capital market strategies. Identifying debt issuance strategies by following the debt issuance process (i.e., identifying the need, structuring the offering, gaining approval, selling the debt, etc.) is one approach. An alternative approach, and the one adopted here, tracks issuer strategies for dealing with the various participants in the debt issuance process.

Strategic management is premised on purposeful behavior and the recognition that others can have an affect on organizational results (Hildreth, 1989). This premise is bolstered by several lines of thinking. Interest group theory holds that public decisions are influenced by an often shifting set of interested parties. Network political economy, as recently extended into state and local debt issuance by Miller and Hildreth (1988), posits that the various participants involved in a borrowing may have conflicting goals and that results of this team effort may differ from the expectations of a single team member, such as the issuer. This highlights the need to explore in more detail the financing perspectives of each debt issuance participant, such as the executive in charge of the public treasury. Applying Freeman's (1984) stakeholder model of strategic management, government finance executives must deal actively with individuals or organizations who can influence, or be influenced by, achievement of the jurisdiction's objectives. This approach follows the public management school of thinking by assessing debt management choices from the

executive's viewpoint, in this case the chief financial officer. Therefore, this article attempts to define the need for purposeful behavior on the part of the issuer relative to key participants in capital acquisition. Employing the term participants instead of stakeholders is not meant to signify significant differences in concept, rather it is to follow standard terminology in the debt issuance domain.

STRATEGIES FOR DEALING WITH PARTICIPANTS

The municipal market works because of the interactions of various participants. A state or local government, as an issuer, sells a debt instrument or security to an underwriter (also called an investment banker), who then resells the security to an investor (also known as a bondholder). The investor, therefore, loans capital to an issuer; in return, the issuer agrees to pay the investor an agreed-upon interest rate (usually semi-annually) and, upon maturity, to repay the principal.

Several other participants enter into the debt process. A paying agent (or trustee) serves as the conduit for the flow of interest and principal payments between the issuer and the investor. A bond counsel advises the issuer on how to meet all legal requirements to borrow and provides a legal opinion to the investor that the debt instrument meets state and local laws and federal tax law standards. Many governments employ financial advisors to assist in defining capital needs and in structuring and completing the deal. Early in the process, citizens may have to approve the planned borrowing. A state oversight board may have to give its approval. If the issuer desires anything more than local bidders or private placement, private credit rating firms must have an opportunity to pass judgment on the probability of debt repayment.

The issuer has an opportunity to influence each participant's actions and decisions. A review of research and practice will help isolate issuer behaviors.

ISSUERS

Issuers face many institutional and market hurdles in the borrowing process. A market penalty is assessed for poor timing, as discussed earlier. Most issuers face a lag time (often measured in months) between a decision to borrow and the actual date of borrowing, especially if voter approval is required and the issue is competitively offered for sale. To elude these structural hurdles, issuers utilize several avoidance strategies.

First, to sidestep the hurdles imposed on general obligation borrowing, issuers turn to revenue bonds. During the 1980s, revenue bonds constituted over 65 percent of the yearly dollar volume of municipal bonds (Figure 1). (Figure 1 omitted) By the first half of 1992, revenue bonds had fallen back to pre-1980 levels but still exceeded the issuance of general obligation bonds. Revenue bonds, to a much greater extent than general obligation bonds, may serve as a strategic tool for municipalities facing fiscal strain or limits (Sharp, 1986). This is consistent with the extensive expansion of special districts and other statutory authorities--often termed off-budget entities--empowered to issue revenue bonds without placing at direct risk the taxing capacity, or full-faith-and-credit guarantee. In fact, many off-budget entities serve as "conduits," defined as a governmental issuer of securities with an ultimate credit source being a private profit-making or nonprofit organization (Zimmerman, 1991). The revenue bond market segment also represents municipalities borrowing in anticipation of future revenue flows (such as collections from nonproperty tax sources such as sales taxes); debt backed by planned, but not guaranteed, lease payments (including certificates of participation); and,

other creative security arrangements.

Second, creative debt instruments help issuers take advantage of changing market demands. For instance, where future interest rates are expected to be higher, investors demand a premium to tie up their money in maturities of 20 to 30 years. Issuers who are unwilling to pay the price to sell these long securities can instead sell shorter maturities. Instruments such as variable rate securities allow issuers to borrow long but at near short-term rates.

In many instances, issuers have the authority to sell yearly bond anticipation notes (BANs) as a source of interim financing for capital projects during the construction period. Upon project completion, the expected strategy is to convert the capital financing from short-term notes (BAN) into long-term bonds. Issuers may deviate from this expected conversion strategy. Given that short-term rates are historically lower than long-term rates and that on occasion (such as the early 1980s) long-term rates hover in the double-digits, short-term financing seems sensible, even for completed projects as long as the tax laws permit such practices.

One manifestation of this economic environment is that issuers may roll-over BANs year after year to avoid the long-term market, where allowed by law, such as in Ohio. The intended strategy is to wait out the market. However, the more times BANs are rolled over, the more difficult it is for an issuer to obtain interest rate reductions sufficient to offset the accumulated, capitalized interest costs.

A contrary strategy is that by delaying entry into the long-term market, the borrower accrues interest cost savings. As noted earlier, Bland (1985) found evidence supporting this delayed entry strategy. However, his study did not take into account the situation where the prospective bond issuer may be incurring and capitalizing interest costs during the delay period by issuing notes. Delay imposes costs, not just benefits (Choate, 1980).

To be successful, issuers must gain a competitive advantage over other issuers. This is best reflected in the timing of the sale or in the pricing of the offering. As might be expected, timing finesse is easier to accomplish if the choice is negotiated pricing rather than announcing and, after a specified number of days, holding a competitive auction.

Issuers using competitive auctions must be willing to terminate the sale at the last minute by rejecting all bids if the market undergoes a significant change in direction. A highly elastic relationship exists between increases in interest rates and the volume of issuer cancellations and delays (U.S. General Accounting Office, 1983). Market conditions can be systemic to all markets or peculiar to the municipal market. Instances of market volatility include legislative consideration to tax interest payments of municipal bondholders in 1968, tax reform initiatives in early 1986, stock market disruptions in 1989, and war news in 1991. A long-set auction consummated at the time of volatility in the market may quickly close favorable windows of opportunity to borrow, resulting in higher than expected borrowing costs. Either canceling a sale at the last minute or rejecting all bids is a serious step. Compelling reasons may exist for proceeding with a sale, especially if the time required to restart the issuance process is long, imposing still further uncertainty and risk.

Traditionally, state and local governments give notice of their plans to issue securities weeks ahead of time, specifying the date and time when bids to purchase are due. New York's Local Finance law (Section 58.00(2)) breaks with tradition by permitting its municipal corporations to announce to the market 30 day window within which the auction may be made. Within

this period and with 48 hours notice, the municipal corporation can set the time and date for the auction. Alternatively, the issuer can set a time and date for the auction and retain the option to make a change in time and date if done at least 48 hours prior to the time originally scheduled. The new schedule has to be with 48 hours notice, too. These options permit a borrowing jurisdiction to time its auction with more sensitivity to market conditions, a hallmark of negotiated sales.

INVESTORS

Historically, an issuer had little interest in knowing who actually held its securities, for several reasons. First, issuers sell the security to the underwriter, who then markets them to investors. As a result, the issuer does not deal directly with investors at the sale nor does the issuer know the pool of likely investors, especially individual investors. The common view of the market holds that underwriters serve as salesmen to get a product of demand (by the investor) from a supplier (an issuer) and, in the process, make a transaction profit (measured in fractions of the total value) by linking the buyer with the seller.

A second reason for an issuer's historical inattention to investors is due to the fact that even after the sale, issuers could not find out, even if they inquired, who actually owned the securities. Until 1982, municipal bonds were negotiable instruments, meaning that the last holder could redeem the security with little fear of contrary evidence of ownership. As a result, the issuer had no record of all investors in its securities. The Tax Equity and Fiscal Responsibility Act of 1988 changed the rules, however. Now all municipal securities over one year in maturity must be registered. Although not mandatory for previously issued securities, the investment banking community has responded by converting bearer securities into registered form whenever the securities are traded or come into the possession of institutional investors.

Because issuers are more prone to take an interest in their investors if they know their names, new strategies are possible. Issuers now develop debt issuance plans based on current and prospective investors' interests because the segmentation of the municipal market means investor clienteles are different for short-and long-maturity bonds (Poterba, 1986). Tax-exempt mutual funds, for example, need a stock of relatively short-term maturities. Tax exempt bond funds also are major buyers of municipal securities. The growth of holdings by individuals and mutual funds combined was steady, and pronounced, into the 1990 (Figure 1). The early 1992 data reflect competition for tax-exempt income from the remaining holders, including banks and insurance companies.

New financial products, such as "minibonds," allow governmental jurisdictions to alter this bifurated relationship between issuers and investors. A minibond is a small denomination debt instrument (in $100 or $1,000 units) sold directly to customers. This type of product appeals to retail customers, allowing the borrowing government to attract investors it might otherwise be unable to attract.

A more involved investor relations program can help issuers. Some issuers develop strategies to appeal directly to institutional investors, perhaps attempting to offset the perceived, overly critical, bond rating agencies. Issuers attempt to convey that their credit is stronger than the bond ratings might otherwise suggest. Basically, an issuer seeks to let institutional investors know that it is attentive to the needs of large investors.

Recognizing their market strength, representatives of institutional investors (such as mutual fund companies and insurance firms) along with

market analysts from investment banking firms have initiated efforts to require debt issuing jurisdiction to enhance the disclosure of information that might influence the pricing and trading of bonds in the secondary market (that is, after a bond has been issued but before it matures). A key step in this movement is to get issuers to certify that they will satisfy these continuing disclosure concerns, under the implicit threat that this segment of the investor community will not buy the bonds otherwise (Ciccarone, 1992). This is important to an issuer because a shrinkage in demand means the cost to issue debt will rise, all other things being equal.

UNDERWRITERS

Investment banking firms underwrite the purchase and resale of the securities. Underwriters, as they are called, provide issuers with informed market access because most U.S. state and local issuers tend to rely on outsiders to gauge the market's interest in their securities. Issuers can use competitive auctions to ensure that the bids received from underwriters reflect current market assessments. The overwhelming evidence reveals that competitive bidding promotes more efficient market pricing, meaning that an issuer's interest costs decline as the number of bidders increase (Cook, 1982).

A negotiated sale is one where the issuer selects an underwriter to conduct the debt issuance. This segment of the market has grown to almost 75 percent of all financings (see Figure 1). A long line of research indicates that issuers pay an interest rate premium to negotiate the sale rather than to offer it for competitive sale (Cook, 1982). Bland shows, however, that an experienced issuer (measured by prior market entries) can use negotiation to achieve an interest rate comparable to competitive bid rates (Bland, 1985). This finding holds up only if there is little bidding competition, calculated at three bids. So, if the experienced issuer expects more than three bids, then a competitive sale is likely to result in the lowest cost; if the experienced issuer expects no competition for the bonds, then a negotiated sale is less costly. For first-time or very infrequent debt issuers, Bland's advice is to sell "bonds through competitive bidding in order to avoid the heavy penalty placed on inexperience if negotiation is used" (p. 237).

Competitive auctions as practiced in the United States means the underwriter individually or in a group (called a syndicate) bids for all the bonds in the offering. Inzer and Reinhart (1984) suggest that issuers should change this practice and allow the underwriter to bid on parts of the offering, not just the whole offering. This change would allow underwriters to select the optimal bonds for their clients. For this tiered-bidding system to work, however, the issuer would have to assume the risk of having no bidders for particular maturities, resulting in less than the desired amount of proceeds from the sale. To mitigate this result, the issuer would need flexibility in the amount to be offered at each maturity. By accepting more uncertainty, including the exact amount of debt proceeds, Inzer and Reinhart postulate that the issuer should receive lower interest costs, all other things considered. Two recent Nevada bond sales tested the tiered-bidding theory with favorable results. In 1989, the State of Nevada offered $48.7 million in three distinct series of maturity, with separate bids required on each. Interest savings of $36,000 were achieved when two underwriting syndicates bought different parts versus the cost if the syndicate winning two had also won the third series (Lamiell, 1989). A Nevada school district used a similar sales structure in 1990, lowering its borrowing cost by more than $160,000 (Walters, 1990).

FINANCIAL ADVISORS

A financial advisor, if employed, serves as an issuer's impartial consultant on structuring and selling securities. When an issuer auctions general obligation bonds, the services of a financial advisor are in addition to those of the underwriter. With negotiated sales, the underwriters have the responsibility to optimize debt structure and pricing, both from an issuer's and the underwriter's standpoint. This reduces, but does not entirely eliminate, the need for an independent financial advisor.

Financial advisors press for long-term, comprehensive debt strategy consultations not just the traditional transaction-driven service based on each debt issuance. Issuers utilize financial advisors to "work-out" financial difficulties (such as Cleveland's note default and the recurring fiscal problems in Detroit and Philadelphia) and to enhance market perceptions (such as Boston's multi-year strategy of redefining its economic image). The visibility of financial advisors was most strikingly demonstrated in Philadelphia where, in 1991, a locally based, but nationally known, financial advisor campaigned, but was defeated, in a bid for election as mayor. His failed campaign emphasized his skills in municipal finance. After the election, the victorious mayoral candidate quickly appointed the (defeated) financial advisor's firm to spearhead a review of city finances and to serve as its ongoing financial advisor. By working with the issuers to advance broad fiscal agendas, financial advisors expand their scope of services.

Independent financial advisors seek to segment their industry, separating themselves from investment banking firms providing financial advisory services. A new national association of independent financial advisory firms is dedicated to enhancing the level of professional credentials of its members and to marketing to issuers the need for independent financial advisors. An issuer has to realize net economic benefits from such advice (savings in borrowing costs to offset fees paid to financial advisors) or the total cost of issuance increases as financial advisory fees are combined with the underwriter's cost, bond rating agency fees, bond counsel fees, and other transaction expenses.

BOND COUNSELS

A bond counsel plays a critical role in an issuer's attempt to obtain underwriter and investor interest in an issue. When tax laws are uncertain, bond counsels hesitate to issue an opinion on the tax-exempt status of bonds. As the events of early 1986 demonstrated, the market expects a bond counsel to help screen out unacceptable risks. In early 1986, the U.S. Senate held without action the House-passed tax reform bill that included a retroactive effective date of January 1, 1986, along with significant limits on debt issuance that issuers would comply with current law, proposed law (that in the House bill), and potential law (that which had not yet been voted upon). Needless to say, bond lawyers hesitated to take such a step toward unknown accountability. Because of those tax-law uncertainties, many issuers were unable to take advantage of an otherwise favorable interest rate market.

Bond counsel expertise enhances an issuer's financial agenda. A bond counsel can point out seemingly small nuances in the law permitting the desired public purpose to be debt financed. Whether the goal is to further a joint public-private capital investment venture or to provide street lights in nonincorporated areas of a county, presumed legal restrictions are prone to new interpretations and tests.

When a debt issue is embedded in trouble, the bond counsel can be part of the problem as well as part of the solution. As bond counsel of record on a bond issue facing imminent technical or actual default, the bond counsel

faces the potential of a liability suit by bondholders, as those associated with the WPPSS defaulted bonds found out. If a troubled debt issue is dealt with early enough, the bond counsel can serve as a powerful ally in designing a remedy. Given that the bond counsel is at risk too, it can work to the issuer's advantage. Because the major bond counsel firms are also some of the more prominent legal firms in a particular state, if not the region or nation, their influence runs throughout the various seats of power. For an issue facing troubled times, bond counsel efforts to secure interlocal, state, and/or federal legislation or assistance can rebound to the jurisdiction's benefit.

TRUSTEES

A paying agent, generally a financial institution, is selected by the issuer to receive and disburse coupon and principal payments to bondholders. For revenue bonds, however, the same, or a different financial institution, enters into a more complicated legal duty on behalf of bondholders, serving as a fiduciary to ensure that the issuer follows all bond indenture requirements.

Although all is fine as long as the debt issuer pays principal and interest as specified, the trustee's role expands as trouble looms. In scenarios concerning troubled revenue bonds, the trustee must take care to act as if the assets were his own--a fiduciary role (Sawicki, 1985). In such cases, the trustee weighs the consequences of asserting remedial powers, such as to assume management of the debt-financed project or to "pull the plug"--that is, to declare the bonds due and payable immediately. In such a situation, an issuer may attempt to position the trustee so that the trustee's success depends upon a cooperative relationship with the issuer instead of the adversarial one envisioned by the remedial powers provisions of the indenture.

By the nature of their position, trustees often detect a change in a debt issuer's repayment status before many others, especially bondholders. A trustee's duty is to report to current (registered) bondholders. By design this gives sellers of the outstanding bonds a market advantage over buyers because of information asymmetrics. To counter this secondary market problem, the trustee industry group (a part of the American Banking Association) encourages its members to provide broad market disclosure of significant events or developments, not just provide the information to current bondholders.

CREDIT RATING AGENCIES

Credit rating agencies are paid by the debt issuer to provide an assessment of its risk of nonpayment of borrowed funds. More practically, rating agencies serve as de facto gatekeepers to the broad municipal bond market. For inexperienced or inadequately qualified issuers, either the expected or the actual decision of credit raters can effectively bar an issuer's market entry. Thus, bond ratings are not sought by all debt issuers. Some issuers acknowledge their negative market qualities and rely upon local investors (e.g., local banks), not the broad market of investors. For example, private-purpose revenue bonds, small-sized general obligation bonds, public purpose revenue bonds, and short-term notes often are placed with local investors. If an issuer desires or needs access to the national, or even regional, public market of investors, then an investment-quality rating (the top four rating levels, "Baa" or higher) is necessary. The rating is necessary for both the initial offering of the debt as well as throughout the life of the debt, if the issuer expects any secondary market for that or any future debt issue.

Although credit rating agencies are unlikely to acknowledge their role as

market gatekeepers, issuers follow behavioral patterns that substantiate this observation. The hurdle of achieving an investment-quality credit rating leads to at least two observable sets of behavior by issuers: to attempt to influence the rating process and/or to avoid the rating process, or a part of it.

Avoidance of the credit ranking process appears uninviting for all but the smallest issuers. Although a quarter of all municipal bonds are unrated, the total dollar volume of such bonds make up less than 10 percent of the entire municipal bond market (Petersen, 1989). This means there are numerous small dollar-sized bond issues that avoid the rating process.

With two private rating services dominating the market, a second avoidance strategy is to have a single rating, either to avoid a rating agency perceived to be overly critical or merely to stand on the basis of one rating. As to the preference for one credit rating service over another, the two dominant bond rating services enjoy similar dollar volume market shares (Petersen, 1989). Furthermore, to assume that one rating saves money is contrary to research that suggests that a second rating lowers an issuer's borrowing cost, even if the ratings are different (Hsueh and Kidwell, 1988). In fact, while only about 40 percent of new issues carry ratings from both Moody's and Standard & Poor's, this group represents almost 70 percent of the total dollar volume of the municipal market (Petersen, 1989).

An issuer has a third option, avoiding a direct rating on its credit quality, in essence, by leasing the credit of a higher-rated institution. Credit enhancement takes the form of bond insurance or a letter of credit facility, whereby a third party guarantees debt service. Bondholders gain added security from the third-party guarantor's credit. Bond insurance also offers economic benefits to issuers (Quigley and Rubinfeld, 1991). Research indicates that issuers expecting a rating below the second highest rating class ("Aa") should consider credit enhancement (Reid, 1990). As might be expected then, the market for credit enhancement services has grown in recent years (Bond Buyer 1991).

Most debt issues carry a bond rating, either their own or a borrowed credit. In fact, a three-year study of debt concluded that only one in ten issues (amounting to 2 percent of the dollar volume) did not enjoy a credit rating either directly or indirectly. Those without some form of credit rating were small issues, averaging $1 million dollars in size (Petersen, 1989, pp. 25,28).

A fourth avoidance behavior is to sell a short-term note to local investors without a rating. The issuer preserves the option to request a rating at some later point, especially at the time of conversion into a bond. An advantage of rolling over the yearly note for several years is that it offers the jurisdiction time to take steps to position itself in a better credit light. Yet rating agencies now assign ratings to notes and look upon increasing amounts of short-term debt in negative terms.

Avoidance of bond ratings may be in the best interests of small governments, for several reasons (Sullivan, 1983; Palumbo and Sacks, 1987). First, for small-sized bond issues, the fee to obtain a bond rating is a cost of issuance that may not be adequately recovered in interest savings. Second, small governments are unlikely to receive high bond ratings, especially for general obligation bonds. Higher bond ratings are associated with larger-dollar-sized amounts and larger-sized population centers. Thus, small and rural governments face systematic adverse market assessment of credit worthiness (Palumbo & Sacks, 1987). Yet in an odd twist, small, rural government do not have to overcome as much investor suspicion as those borne by a larger jurisdiction. Unlike larger debt issuers who rely

on a national investor base, small government bonds often are bought locally; these local investors must trust their own assessment of the debt issuer's credit quality. Thus, a small government may avoid a bond rating and still obtain a reasonable rate of borrowing because local investors know that government's capabilities (Sullivan, 1983, p. 110).

An issuer attempts to influence the bond rating decision by enhancing its arguments and the security of the planned issue. Measures to enhance the security backing an issue range from obtaining a third-party guarantee to tightening the financial package, such as putting more up as collateral (e.g., an earmarked sales tax plus sewer user fees for a revenue bond). A guarantee can take the form of a standby letter of credit (primarily for short-term borrowing), a state program (as in Texas where the oil-land-enriched Permanent Fund guarantees local school district borrowings), or private bond insurance. Although a third-party guarantee results in the highest credit rating (an automatic "Aaa" rating in most cases), it does not guarantee that the issuer will borrow at levels commensurate with the highest rating (Bland, 1987; Reid, 1990).

To enhance its credit quality arguments, an issuer has to document the political, financial, and managerial control necessary to achieve effective public services. This is achieved through such actions as tight financial controls, protection of fund balances, adoption of generally accepted accounting principles (GAAP), adherence to strong financial disclosure practices, and maintenance of political consensus. These steps represent an issuer's preventive or preemptive strategy for dealing with bond rating agencies. That is, issuers attempt to anticipate, and then implement, the more obvious fiscal management policies and practices that credit analysts consider indicators of strong management quality (Doppelt, 1985). Generally, actions taken to influence an issuer's credit standing are also effective fiscal management. However, as Detroit was recently told by Moody's Investors Service, strong fiscal management will not offset the negative credit implications of the lack of viable private economic activity (Peirog, 1992). Strong economic activity and diversification are the keys to a high bond rating (Ioviscek and Crowley, 1990).

As part of an enhancement strategy, issuers seek to maintain close contact with the rating agencies to foster harmonious relations and timely disclosure of relevant information. To help advance the spirit of continuous disclosure, issuers share with rating analysts news that could be interpreted as having either positive or negative impact on credit quality. This nurturing of a relationship is very noticeable in the tendency of governors and mayors to visit the raters and to recognize the political, as well as financial, importance of debt strategies, given the credit raters' ability to issue a locally perceived negative or positive signal, as retold by the local media.

VOTERS, MONITORS, AND CONTROLLERS

Issuers with a requirement to obtain voter or state approval for debt issuance can attempt to influence or avoid some, or all, of these barriers. Voters lend to approve bond elections, at least in terms of a national aggregate trend (Bond Buyer 1991). Notwithstanding historical approval trends, some issuers cannot obtain voter approval despite repeated attempts. Needless to say, each bond approval referendum requires a particular marketing campaign. An effective strategy for voter approval tends to be built around a highly perceived, but justified, need coupled with a political-style campaign to motivate citizens to vote for the proposal within a political environment of fiscal trust and accountability.

Issuers show a propensity to avoid onerous debt hurdles, if possible, This is reflected in efforts to: (1) use less-encumbered financing sources or (2) take steps to remove some of the restrictions. One opportunity arises

when the restrictions on issuing revenue bonds are less than those for general obligation bonds. For example, Louisiana local governments must obtain voter approval for general obligation bonds but not for sales-tax-backed revenue bonds; as a result, revenue debt outstanding is significantly higher than general obligation debt. The incentive to utilize revenue bonds is intense in such situations.

Another issuer strategy is to circumvent debt limits. Often this can be accomplished by using "off the debt schedule" financing, such as lease-purchase deals, certificates of participation (COP), or loans from statutory authorities (i.e., a state-created financial conduit agency that issues revenue bonds to generate proceeds to loan to other governmental jurisdictions).

California local governments became major users of COPs because of Proposition 13 restrictions. This innovation spread widely across the country. As the recession of the early 1990s accelerated, investors in COPs grew nervous as public officials publicly questioned the requirement to continue appropriating funds to repay the COPs, knowing that investor comfort in the bonds comes from the issuer's agreement, but not legal requirement, to appropriate yearly funds to repay the investors. This concern was well founded given the 1991 COP default by the Richmond (California) Unified School District and the state's belated questioning of the legality of such borrowing.

Some issuers have two sets of general obligation debt issuance powers. One is greatly restricted in dollar amounts but requires only the governing body's approval--termed unvoted debt in Ohio, for example. The other requires voter approval but has a high ceiling of available borrowing power--termed voted debt in Ohio. Public officials prefer, of course, the flexibility associated with debt merely requiring the approval of the governing body. Thus, one strategy is to carefully select certain projects for placing before the voters, those more attractive and characterized by political consensus. The unvoted debt capacity is reserved for projects where timing is of the essence or the likelihood of voter approval is more suspect. Rationing within the unvoted-debt capacity becomes a significant fiscal strategy. Effective management of the unvoted debt capacity requires the imposition of internal capital hurdle rules to avoid depleting the slack capacity too quickly.

In summary, issuers adopt strategies to circumvent debt monitors, including the voters. The problem with this behavior is that public officials focus more on how to manipulate state and local debt restrictions than on effective strategies for matching capital needs to the market and the price for borrowed funds (Sbragia, 1979; and, Peterson, 1990). In the end, such debt strategies may prove successful, but the issuer may pay the price in significant interest rate differentials whether it is due to delay, issuance of revenue bonds, or other factors.

CONCLUSION

This article suggests that issuers of state and local government securities have an optimum capital goal--to obtain the lowest cost of capital over the desired repayment schedule--and that this goal is achieved through Strategic choices. I discussed strategies built around the phenomena that issuers differ in their capacity to borrow and in borrowing costs. I also reviewed selected strategies for an issuer to manage its own financial agenda in the municipal market. Some issuer strategies have the benefit, if successful, of generating interest rate savings while other strategies have less precise economic benefits for the issuer. The research on debt strategies is sporadic at best. More empirical work is required.

While this article is only an exploratory discussion of issuer strategy, one point seems to emerge: issuers should follow deliberate capital strategies instead of allowing capital decisions to evolve out of inattention, being unduly rayed by others in the debt issuance process, or incremental decision making. A mistake in this management area stays with the community for many years to come, as long as the debt is outstanding.

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THIS IS THE FULL-TEXT.

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